

1 Relevant experience of the commenter

I am an amateur radio operator (callsign K3NA) and have been an active user of the 160m band for 27 years. My primary activity on this band is long-distance international communications. My experience includes operations from outside the USA, attempting to contact USA amateur radio operators on 160m. I have attempted these communications from the Middle East (Syria, Saudi Arabia), the Pacific (Clipperton Island, Rotuma [Fiji], Jarvis Island [USA]), Australia (including Lord Howe and Norfolk Islands), the Caribbean (Puerto Rico, Curacao, and others), and western and eastern Europe (France, Switzerland, Russia). My comments cover both the perspective of a USA-based radio operator attempting inter-continental communications, and a non-USA operator attempting communications with the USA.

2 Background

International communications are a popular, but by no means the only, activity on 160m. Successful communications are a particular challenge, requiring:

- Appropriate propagation conditions: These conditions can be fleeting, lasting only minutes, in many cases. Available propagation may result in only very weak signals.
- Quiet receiving conditions: Receiving conditions can be contaminated by natural events, manmade noise sources.
- Effective antennas.
- Cooperation by other operators: Other operators also engaged in international communications on the same or nearby frequencies must follow good operating practices in order for successful international communications to occur.

Other amateur operators have interfered with international communications much more frequently in recent years. Such interference often occurs because:

- The other operator is in a location that can not hear the distant non-USA station (no propagation), and is unaware that international communications is being attempted. Such interference usually is of short duration. Once such an operator hears that international communications are being attempted, the operator usually will (a) join in the group listening to the non-USA station or (b) shift to an unused frequency.
- Technical interference between adjacent signals: key clicks, etc. These problems, once rare, have become frequent – even commonplace – in the last 5 years due to design shortcomings in popular manufactured transceivers. The problems have recently received much publicity within the 160m amateur radio operator community and are not a subject of this petition for rulemaking.
- Other operators are using the same frequency but using a different mode... and therefore not giving attention to the underlying communications. It is not unusual for such operators to continue to interfere (usually unintentionally) – especially if these interfering operators are in locations with no (or very limited) propagation to the distant, non-USA station. This form of cross-mode interference (typically voice-CW) has also become commonplace in the last five years as 160m becomes more heavily occupied.

Such interference is particularly frustrating to those of us who, at significant personal expense, travel to rare and distant locations to set up temporary amateur radio stations. During such a trip, we have just a few days (typically 10 days) to attempt long distance, weak signal communications on 160m. Natural propagation often offers limited times for communicating with the USA (typically a few hours per night) – and frequently some nights are unusable due to natural static levels or propagation variations. On the occasions when natural propagation and receiving conditions permit communications with the USA, it is particularly disappointing when international communications can not occur simply because some amateur radio operators – unaware of weak signals on a different mode on the same frequency – simply begin transmitting and thus eliminate the ability for their fellow USA stations to hear the weak, distant station.

Prior to 1990, cross-mode interference was relatively infrequent. In the last decade activity on 160m has tripled (as indicated by contest scores and DX awards programs). Interference has risen even more rapidly as the band (particularly the lower third of frequencies) fill up with activity.

As noted by the petitioners, in 2001 July the ARRL adopted a voluntary bandplan providing a subband (1800-1843 kHz) reserved for narrowband communications. The voluntary bandplan has resulted in some improvement in cross-mode interference. But the improvement seems limited: cross-mode

interference to international communications remain commonplace. The voluntary plan is being ignored by too many USA operators.

3 Recommendation

I recommend that the Commission grant the rulemaking requested by the petitioners.

4 Consequences

Granting the requested rulemaking will largely eliminate one of three main sources of interference to international communications on 160m.

Granting the rulemaking will reduce frequencies available for wideband communications on 160m by about 24%. This reduction will not materially impair wideband communications on 160m. Current wideband activity on 160m rarely occupies the entire 200 kHz of the 160m band. While activity levels are expected to increase, the recommended 43 kHz reservation for narrowband modes appears to approximately balance the level of crowding between narrowband operators (in 1800-1843 kHz) and wideband operators (1843-2000 kHz).

If the Commission does not adopt the requested rulemaking, international communications involving USA operators on 160m will continue degrade at an accelerating rate from additional, domestic USA cross-mode interference as activity levels continue to increase.

— end —